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4. FIVE-STRIPED PALM SQUIRREL (*FUNNAMBULUS PENNANTII*) IN RISHI VALLEY, CHITTOOR DISTRICT, ANDHRA PRADESH¹

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According to some recent publications on Indian mammals, the Five-striped Palm Squirrel (*Funnambulus pennantii*) is a species of northern India, found south of c. 16° N, i.e. around Dharwar in the west (Nameer 2000; Menon 2003), and on the east and in central India the limit is indicated as around 20° N (Corbet and Hill 1992). It is replaced in southern India by the closely related and similar looking Three-striped Palm Squirrel (*Funnambulus palmarmm*). Earlier writers like Sterndale (1884) treated both species as one till around the beginning of the twentieth century (Sathasivam 1999). Prater (1980) on the other hand says: "The Five-striped Squirrel is common in northern India, particularly in the drier and more arid portions, and extends into the dry plains of the south. The Three-striped species predominates in the south, and in the moister parts of western and eastern India. Both species may, however, be found living in the same area."

I have been observing the Five-striped Palm squirrel in the Rishi Valley area (near Madanapalle, Chittoor district of Andhra Pradesh), which is 13° N, for the past several years and have, in the last few months, made close observations on them. These squirrels are not shy and if one remains quiet they are seen at a close range.

These squirrels are found in arid, scrub and boulder covered parts of the valley, away from cultivation and habitations, though they could be seen close to agricultural lands occasionally. I have been seeing at least four animals on the roadside hedges (agave) near Rishi Valley, and suspect there may be more animals. I have also often seen them at another location in similar dry habitat about two kilometres away from the location. It appears unlikely that the population in Rishi Valley is introduced as the squirrels are also noticed in appropriate habitats, even 20-25 km away from Rishi Valley (Suresh Jones pers. comm.).

It is unfortunate that all books distinguish these two species only on the basis of the number of stripes. Some features that I have noticed of these animals that are distinct,

apart from the habitat segregation are: their calls that appear sharper than the Three-striped species, which are abundant in the cultivated areas and habitations inside the school campus. The presence of a dark stripe (eye-band) that contrasts with the white cheeks; an indistinct supercilium is also seen above this dark stripe. The Five-striped appears slimmer and the dark stripes on the back appear to contrast more with the body coloration. The additional pale stripes on the flanks are clearly noticeable in some individuals, even without binoculars. The tail appears less bushy.

I am not sure if these features are uniformly present in all individuals across the country or are peculiar to the population in Rishi Valley. Even here they appear indistinct in some individuals. Only some of the photographs on the internet and publications confirm this. According to Kumaran Sathasivam (*in litt.*), "I have found these stripes to be not conspicuous in the field in Delhi. I had to look carefully to discern the five stripes. The books too say the outer stripes are obscure in skins."

Enquiries with local villagers revealed that they do know the existence of two species that co-exist in their environs, and they are aware of the habitat preference of the two species. They distinguish them based on their habitat preferences, coloration and tail. They do not seem to have a distinct name though (Suresh Jones pers. comm. in 2005).

In view of the above observations, I feel we need to re-examine the skins of all Palm squirrels in Indian museums from various localities, and also conduct field research to rework the field marks, exact distribution, and taxonomy of these common mammals.

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5. THE GAUR *BOS FRONTALIS* LAMBERT IN MANIPUR¹ANWARUDDIN CHOUDHURY²¹Accepted May 16, 2006²The Rhino Foundation for Nature in North-east India, Bamunimaidam, Guwahati 781 021, Assam, India.

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The Gaur *Bos frontalis* Lambert is distributed in north-eastern India in discrete populations (Choudhury 2002). The Gaur population in Manipur is poorly known and is believed to be very small (Choudhury 1992). Field trips were made in April 1988, January 1996, January and October 2001, and February 2002 to assess the current status of the Gaur in Manipur. The state of Manipur (23° 49'-25° 42' N, 93° 00'-94° 45' E; 22,327 sq. km in area), (Fig. 1) has two physiographic units – Manipur or Imphal Valley and Manipur Hills. The highest ranges are towards north with Mt. Tenipu or Iso (2,900 m above msl) as the highest peak. The lowest elevation is in the riverbeds near the Assam-Manipur border (less than 50 m above msl).

Till about 1950s, the Gaur was widespread all over the hills in the state, especially in the districts of Ukhrul, Senapati, Tamenglong, Churachandpur, Chandel and Jiribarn subdivision of Imphal district. Stray animals were reported from the hilly areas of Thoubal and Bishnupur (Bishenpur) districts. By then, however, the Gaur has vanished from the Valley. In fact, even at the turn of the 20th century, the species was scarce near the Valley. The Gaur was never common in recent memory as its meat was considered a major delicacy by all the tribes (Zeliangrong, Mao and Tangkhul Nagas, Kukis, Hmars, Biates, Paites and Mizos), and hunting was a regular feature. In the 1960s, when the insurgency started, modern firearms became handy resulting in phenomenal increase in poaching. With the gradual increase in human population, the destruction of forest through felling and *jhum* cultivation has also increased. By 1970s, the main Gaur strongholds remained only in the western and eastern hills with small populations elsewhere. By 1980s, they vanished from the northern hills except for stray individuals from the Dzuko valley and adjacent hilltops. In the 1990s, the Gaur survived only in a few areas, namely (1) Anko / Ango Ching

range and Shiroy; (2) Bunning area; (3) Jiri-Makru forests; (4) Chandel district; (5) Tolbung forests and stray individuals elsewhere. In the meantime, the human population of Manipur grew from 1.07 million in 1971 to 2.29 millions in 2001 (GoI 2001), i.e. more than double in two decades indicating phenomenal increase in *jhum* cultivation.

The main Gaur populations are now confined to the five areas where they were in the 1990s, but in a reduced

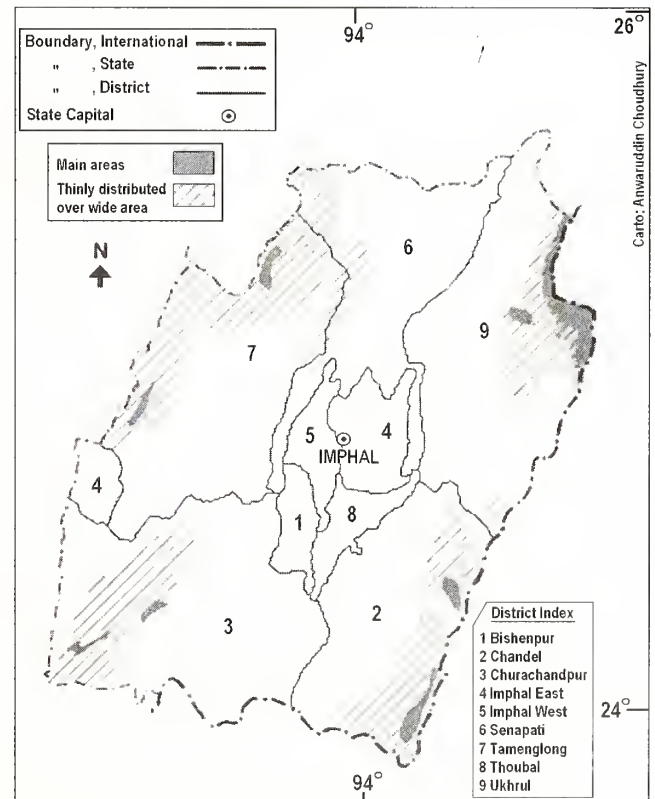


Fig. 1: Distribution of Gaur in Manipur